



STATE OF NEVADA

Department of Conservation & Natural Resources

DIVISION OF ENVIRONMENTAL PROTECTION

Brian Sandoval, Governor

Leo M. Drozdoff, P.E., Director

Colleen Cripps, Ph.D., Administrator

April 7, 2014

Joseph McGinley
McGinley & Associates
815 Maestro Drive
Reno, NV 89511

Subject: Draft Nevada's 2012 Integrated Report

Dear Mr. McGinley:

Thank you for the comments from McGinley and Associates (McGinley) on Nevada's Draft 2012 Integrated Report (IR). McGinley expressed concern that Bryant Creek was described as a Category 1 waterbody in which all designated uses are supported.

The Nevada Division of Environmental Protection (NDEP) considers the Integrated Report to be a planning tool that reflects water quality conditions during a specified time period. NDEP used water quality data collected between October 1, 2006 and September 30, 2011 to develop the 2012 Integrated Report. Fish tissue and sediment data were also evaluated. Elevated levels of mercury in fish tissue resulted in numerous listings throughout Nevada; however NDEP does not use stream sediment data as the sole justification to list a waterbody.

NDEP's responses to McGinley's comments are provided below.

McGinley Comment: ...in the Summer and Fall 2011 sampling, the USFWS found water quality exceedances of sulfate at the Bryant Creek sampling locations and aluminum exceedances in Summer of 2011. Thus the currently available data from the USFWS and Diamond X's own testing demonstrate that Mine contamination continues to reach—and impair—Bryant Creek.

NDEP Response: To evaluate the status of Bryant Creek, water quality data for the assessment period were compared to the existing water quality standards contained in the Nevada Administrative Code (NAC) 445A.118 (Ammonia), NAC 445A.1236 (Toxics), and NAC 445A.1798 (Bryant Creek) according to the methodology defined in the 2012 IR. Only water quality data collected at sites on Bryant Creek in Nevada were used. Data collected at Bryant Creek sites in California were not included in NDEP's assessment.

NDEP obtained additional water quality data from the U.S. Environmental Protection Agency (USEPA) and Lahontan Regional Water Quality Control Board as referenced in your letter, and we have re-evaluated the augmented data set.

The reassessment of Bryant Creek water quality data shows exceedances of the standards for temperature (aquatic life) and total dissolved solids (municipal and domestic supply (M&D)). As a result, NDEP will include Bryant Creek in Category 5 (303(d) List) of the 2012 IR for these parameters. Only one of 17 samples exceeded Nevada's sulfate M&D standard (250 mg/l) and therefore a Category 5 listing for that parameter is not warranted. Nevada does not have a water quality standard for aluminum.

NDEP considered the soils data McGinley submitted with the comment letter. The NDEP-Bureau of Corrective Action (BCA) has begun a review of the soils data for Bryant Creek/East Fork Carson River submitted to them August 28, 2012. As a Focused Remedial Investigation (ordered by USEPA) is underway, NDEP will reevaluate whether an impairment listing is indicated once the investigation is completed. Until then NDEP feels that additional listings based on the soils data are not warranted.

NDEP also considered the results of toxicity testing conducted by the USFWS in 2011. The results showed no observed effect for the Bryant Creek sites in Nevada.

McGinley Comment: The NDEP assessment of Bryant Creek is incomplete. During the assessment period, Bryant Creek waters were sampled and tested only for arsenic, iron, nickel, total suspended solids and turbidity. Report, Attachment 6 p. 2. This is an incomplete analysis since Mine AMD discharges are known to be contaminated with numerous and dangerous constituents including aluminum, antimony, arsenic, beryllium, cadmium, chromium, cobalt, copper, iron, lead, manganese, mercury, nickel, selenium, sulfuric acid, thallium and, zinc.

NDEP Response: NDEP's monitoring includes collection and analysis for numerous constituents including:

Routine Parameters: Temperature, Dissolved Oxygen, pH, Alkalinity, Ammonia, Chloride, Sulfate, Total Dissolved Solids, Nitrate, Nitrite, Total Kjeldahl Nitrogen, Ortho-Phosphate, Total-Phosphorous, Total Dissolved Solids, Turbidity, E. Coli, and Fecal Coliform

Total Metals: Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Copper, Fluoride, Iron, Lead, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Thallium, and Zinc

Dissolved Metals: Arsenic, Cadmium, Chromium, Copper, Lead, Magnesium, Mercury, Nickel, Potassium, Selenium, Silver, Sodium, and Zinc

NDEP compared all readily available water quality data collected during the assessment period to existing water quality standards according to the methodology defined in the 2012 Integrated Report. Bryant Creek does not warrant listing for any parameters except temperature and total dissolved solids. Attachment 6 of the 2012 IR shows waterbodies and

parameters for which total maximum daily loads (TMDLs) have been established. TMDLs for arsenic, iron, nickel, TSS and turbidity for Bryant Creek were established by NDEP and approved by the USEPA on November 28, 2003. Once a TMDL has been established for a parameter, that parameter is not shown in Category 5 (303(d) List of Impaired Waters – Attachment 4 of the 2012 IR). However, as indicated by the checked boxes in Attachment 6, based on the listing methodology Bryant Creek is considered to be meeting water quality standards during the assessment period for arsenic, iron, nickel, TSS and turbidity.

Nevada does not have water quality standards for aluminum, cobalt or sulfuric acid.

McGinley Comment: Additionally, the report does not state when the Bryant Creek sampling was completed. As noted above, capture and treatment of AMD at the Mine only occurs during the warm months. If the NDEP Bryant Creek sampling occurred during the Mine treatment season, the results do not reflect the contamination present during the winter months, when AMD discharge from the Mine is not treated.

NDEP Response: NDEP evaluated samples collected during the assessment period in the months of February, May, June, July, September and October.

Nevada's final 2012 IR has been submitted to the USEPA for approval and is available at <http://ndep.nv.gov/bwqp/303dlist2012.htm>. Please contact me at (775) 687-9449 if you have any questions or would like to further discuss these matters.

Sincerely,



John O. Heggeness, Supervisor
Water Quality Standards and Monitoring
Bureau of Water Quality Planning

Cc: David Gaskin, P.E., Deputy Administrator, NDEP
Greg Lovato, P.E., Chief, Bureau of Corrective Actions
Kathy Sertic, Chief, Bureau of Water Quality Planning